Best Barns USA
Assembly Book

Revised November 27, 2013

the Easton - R 12'x 20'

Manufactured by Reynolds Building Systems, Inc.

205 Arlington Drive Greenville, PA 16125 724-646-3775

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Important Information About Your Shed Kit

Thank you for purchasing our shed kit. These instructions will construct a 12'x20' building. **If you received two books, use the one with the latest revision date.**

Read the instructions before starting the assembly of the building. If you have any questions about assembling the kit, call 800-245-1577. Business hours (8:00-5:00 ET) Monday thru Friday. After business hours call 724-866-HELP (4357) or email to help@barnkits.com.

The material that is included in our kit is listed on the back page. The optional floor package, if purchased, will be supplied by a local lumber supplier.

Our kit does not include the shingles, the quantity needed is listed on the back page. The siding is primed. You will need to apply a finish coat using latex acrylic paint.

Some of the framing lumber was used in the shipping pallet. Unpack the material from the pallets, then unscrew the bottom runners from the 2x4s. The bit for the screws is packed in the hardware bag. This material will be used for wall bracing and tie plates.

Most buildings are installed on a wood floor and the siding was designed to extend over the wood flooring. If the foundation is a concrete floor cut the siding flush with the bottom of the wall plate to prevent the concrete from contacting the siding.

Stacking the boards, according to size, will make them easier to find when needed. Some boards have colored ends. All the wall studs have black ends, stack these boards together**.** **Do Not** discard any material until your building is complete.

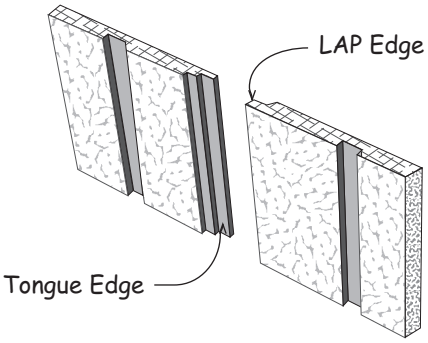
Before you begin construction, be sure to study this assembly manual. Also, obtain a building permit and check all pertinent building code regulations.

Thank you for your purchase.

Bill & Linda Rinella, owners

The siding is made in 4x8 sheets with grooves cut into the face, the long edge is beveled so that the siding overlays where they butt.

To identify which edge we want you to use, we will refer to the edge as either the 'LAP' Edge or the Tongue Edge. Nail siding with 8d galv. nails, spaced 12" apart.



Tool List

- ❑ Hammer & Phillips Screwdriver
- ❑ Framing Square & Level
- ❑ Hand or Circular Saw
- ❑ Power Drill/Screwdriver
- ❑ Measuring Tape
- ❑ **2 - 8' Step Ladders**

Always wear safety glasses when cutting or nailing!

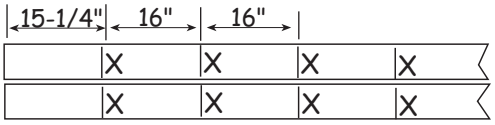
Constructing Details for Deluxe Floor System

Deluxe floors include 4x4 runners, standard floors do not.

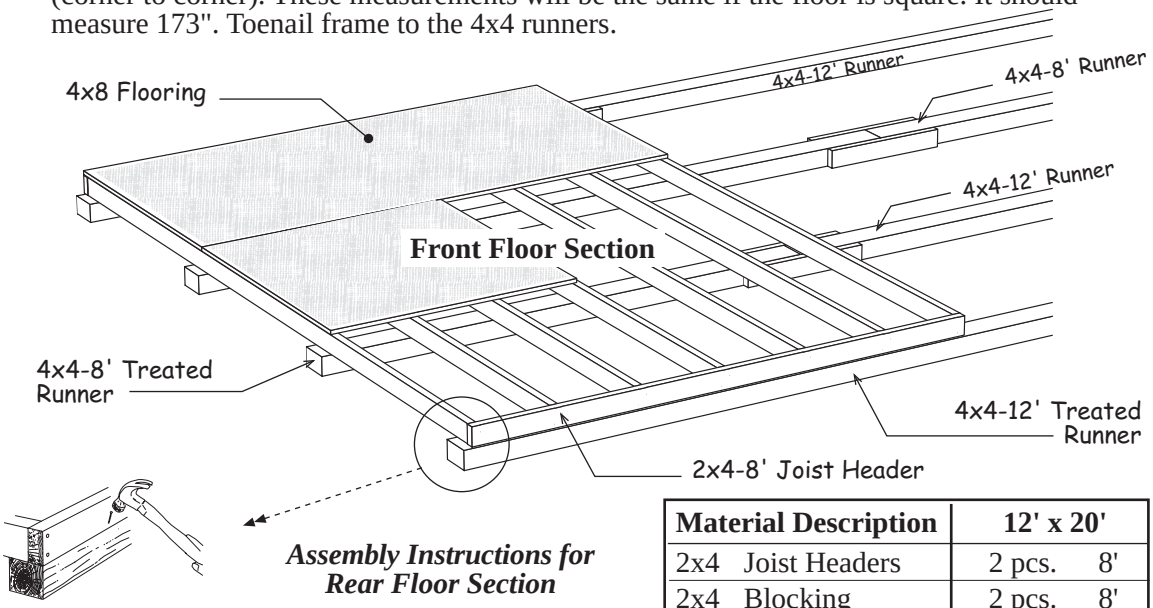
Foundation size is 12'-0" x 20'-0". Check local building codes in your area, the construction may have to change. For a concrete slab, install sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer can be purchased at home centers in rolls 3-1/2" or wider.

1. Stagger the 4x4 timbers as shown below. Cut (2) two 2x4-8' boards into 2' long blocks to secure the 4x4s where they butt together.

2. Cut (2) two 2x4-8' to a length of 8' -0". They will be used for the joist headers. Layout, from left, for 16" on center joist spacing. 'X' marks where floor joist will be placed.



3. Cut (17) seventeen 2x4-12' treated boards to 11' -9". These will be the floor joists. *Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.*
4. Install the floor joists cut above between the 8' joist headers. Secure with 16d galv. deck nails.
5. Place floor assembly over the 4x4s. Square floor assembly. Measure the floor diagonally (corner to corner). These measurements will be the same if the floor is square. It should measure 173". Toenail frame to the 4x4 runners.



Assembly Instructions for Rear Floor Section

6. Cut (2) two 2x4-12' to a length of 12' -0". Layout for 16" joist spacing, *see above*.
7. Install floor joists between the joist headers. Square floor section. Measurement will be 203-5/8". Install this section against the section assembled above.
8. Install 4x8 flooring over the 2x4s. Use 8d galv. spiral nails.

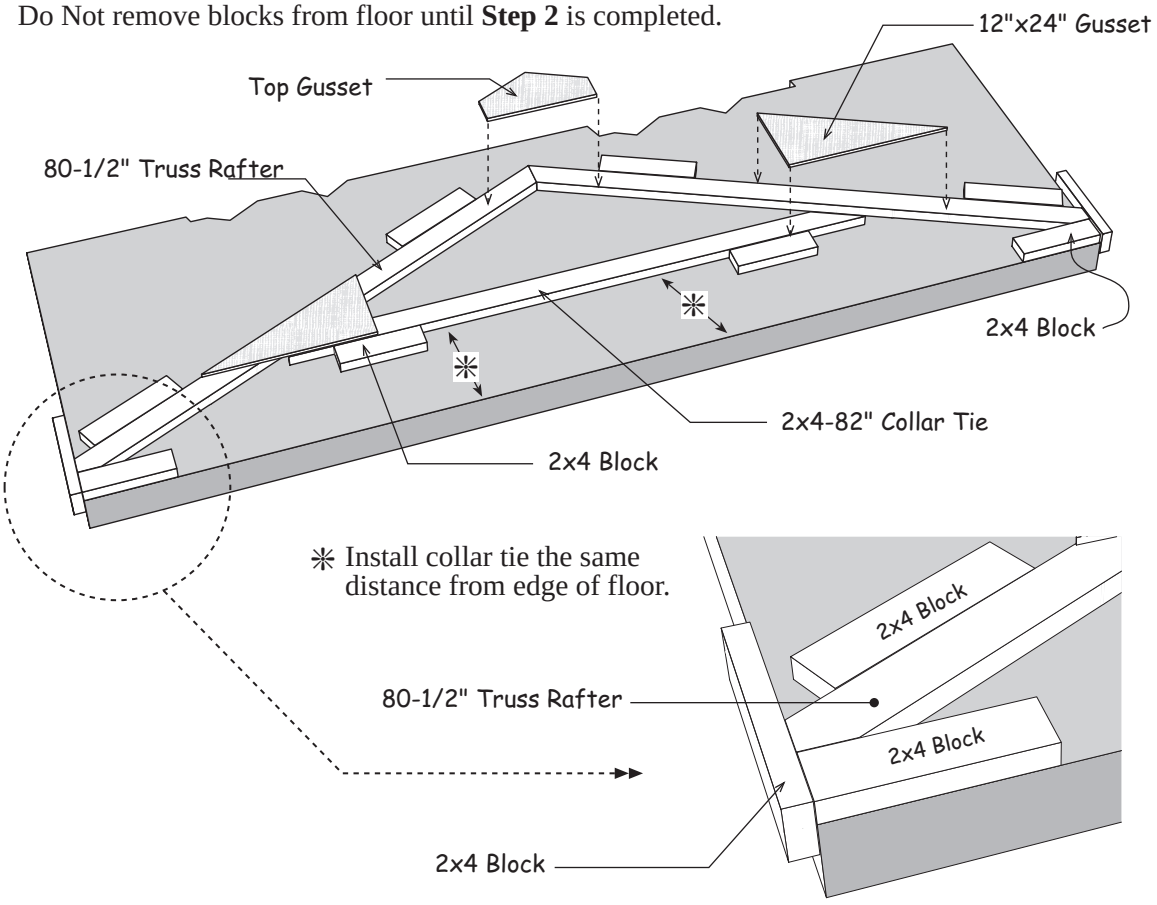
Material Description	**12' x 20'**
2x4 Joist Headers	2 pcs. 8'
2x4 Blocking	2 pcs. 8'
2x4 Joist Headers	2 pcs. 12'
2x4 Floor Joist	17 pcs. 12'
4x4 Treated Runners	4 pcs. 8'
4x4 Treated Runners	4 pcs. 12'
Flooring 5/8" or 3/4"	8 pcs. 4x8
Screw Floor Nails	4 lb. 8d
Galv. Box Nails	5 lb. 16d

Step 1 Assemble Roof Trusses

☞ Building Tip: To aid in the assembly of the trusses, temporarily screw 2x4 blocks to the floor. This will insure that all the trusses are assembled the same. Use 2-1/2" screws. There are short 2x4s, *that may have an angle on one end*, supplied in the kit.

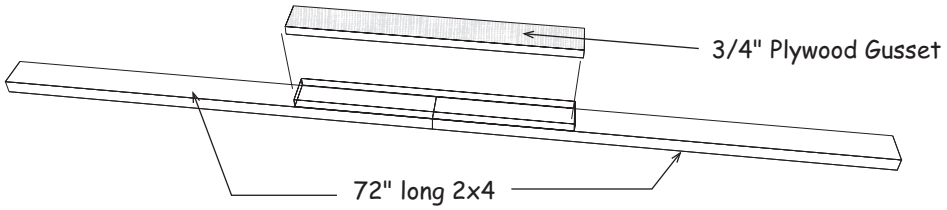
1. Screw 2x4 blocks to the 12' wide end of the floor, at the corner to trap the truss boards.
2. Place (2) two 80-1/2" long 2x4 Truss Rafters and a 82" long Collar Tie together as shown below. The Collar Tie has an angle cut on both ends. Affix 2x4 blocks around the 2x4s to hold them in place and enable all trusses to be built the same.
3. Secure the 2x4s at the top with a 8" x 20" wood gusset. Apply wood glue between the 2x4s and the gusset. Nail the gusset to the 2x4s with 6d common nails, 14 nails per gusset.
4. Install 12"x24" gussets to the ends of the collar tie. Glue and nail using 14 nails per gusset.
5. Turn this truss over and apply wood gussets to the opposite side.
6. Repeat to assemble (8) eight more trusses.

Do Not remove blocks from floor until **Step 2** is completed.

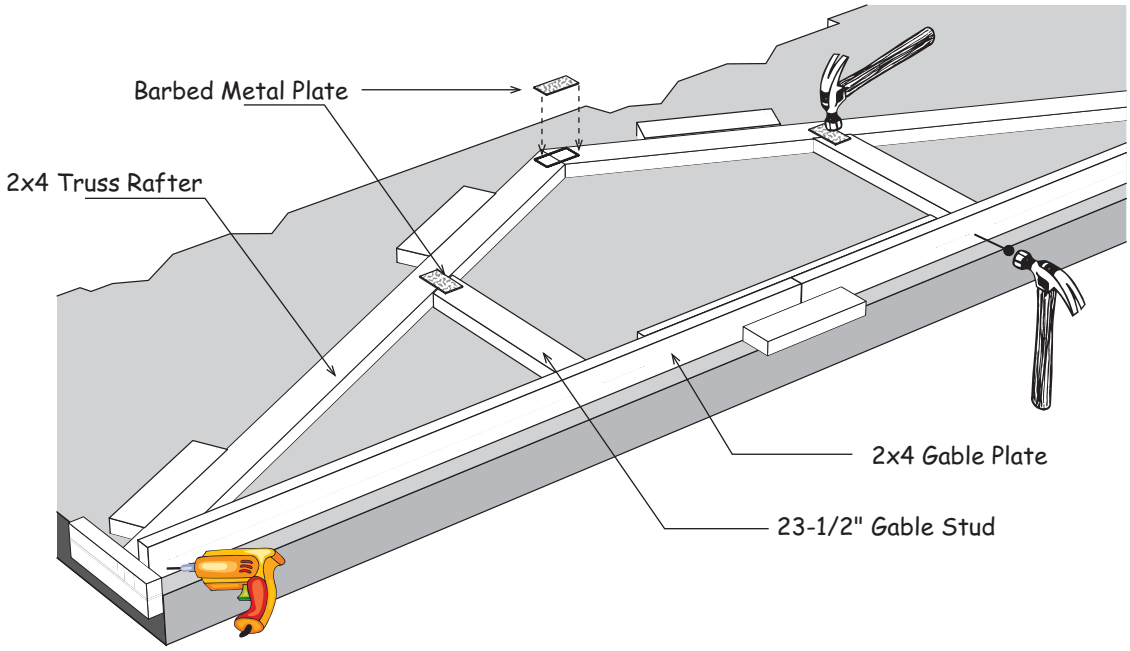


Step 2 Assemble Roof Gables

1. Butt (2) two 72" long 2x4s together and secure them with a 3-1/2" x 31-3/4" long plywood gusset across the top where they butt together. Use glue and 6d common nails. This will be used as the bottom plate on the roof gables.



2. Assemble another 12' long bottom plate.
3. Place (2) two Truss Rafters in the jig. Secure the top together with a barbed metal plate.
4. Reposition the lower 2x4 blocks to hold the gable plate assembled above, in place.



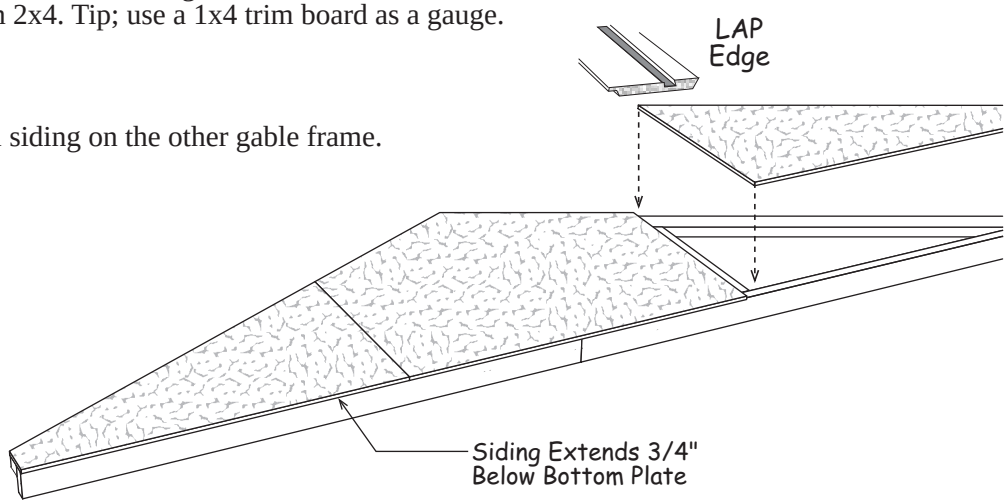
5. Secure the 2x4 Gable Plate to the Truss Rafter with a 2-1/2" wood screw.
6. Install (2) two 23-1/2" gable studs. Nail through the bottom plate with 10d sinkers and secure the top with barbed metal drive-on plates.
7. Repeat steps to assemble another gable. Remove the short 2x4 blocks.

Step 3 Install Siding & Trim on Gables

1. Select one of the gable frames. Turn the gable over letting the bottom plate overhang the floor so the gable lays flat.

2. Install gable siding using 6d galv. nails across the top of the 2x4 frame. Use 8d galv. nails across the bottom 2x4. The siding will extend 3/4" below the bottom 2x4. Tip; use a 1x4 trim board as a gauge.

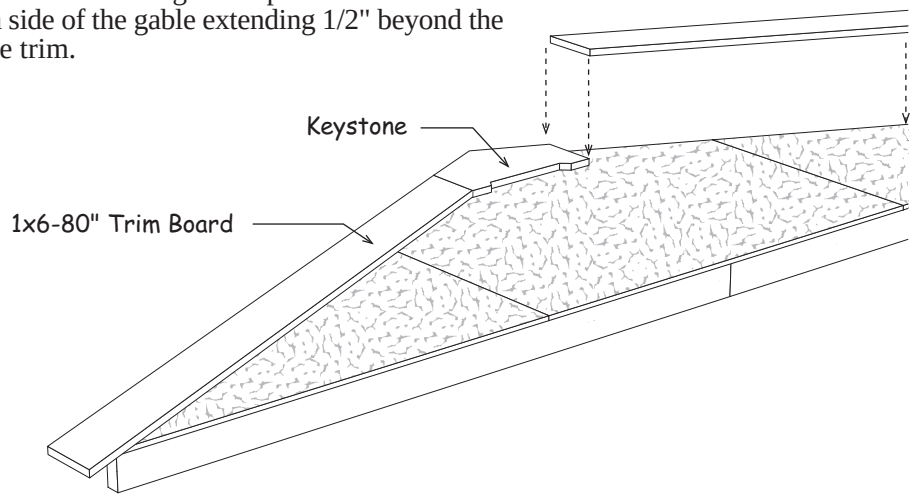
3. Install siding on the other gable frame.



☞ *Tip; Paint the siding and trim boards before installing the trim.*

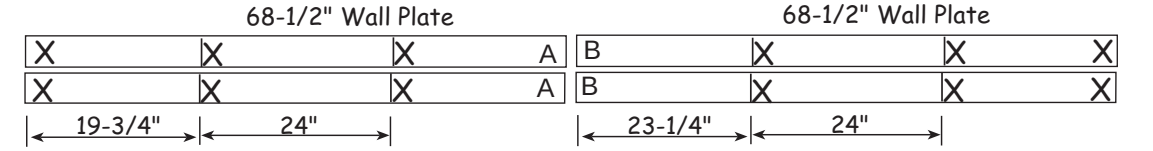
4. Install a white pine trim board, called a 'Keystone', at the top center of the gable. Install this trim board extending 1/2" beyond the gable frame. This will permit the roof sheathing to butt into the trim when installed in a later step.

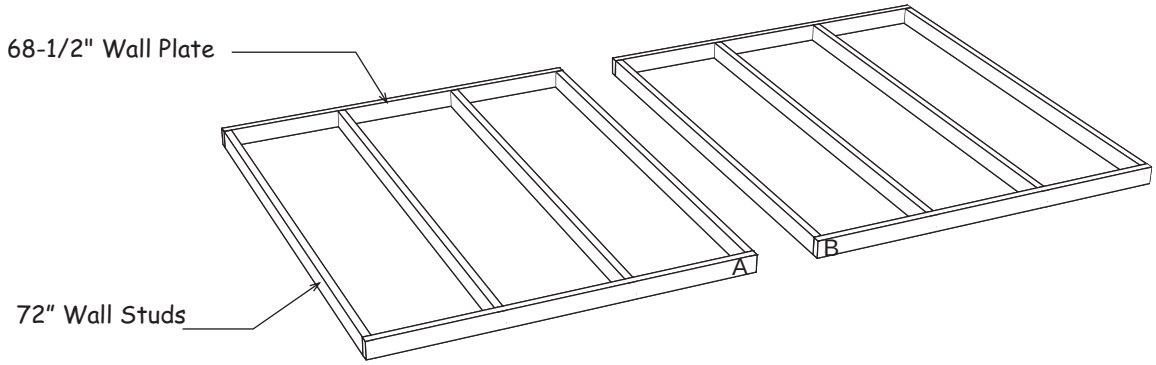
5. Install 1x6-80" long white pine trim boards on each side of the gable extending 1/2" beyond the gable trim.



Step 4 Assemble 12' End Wall Panel

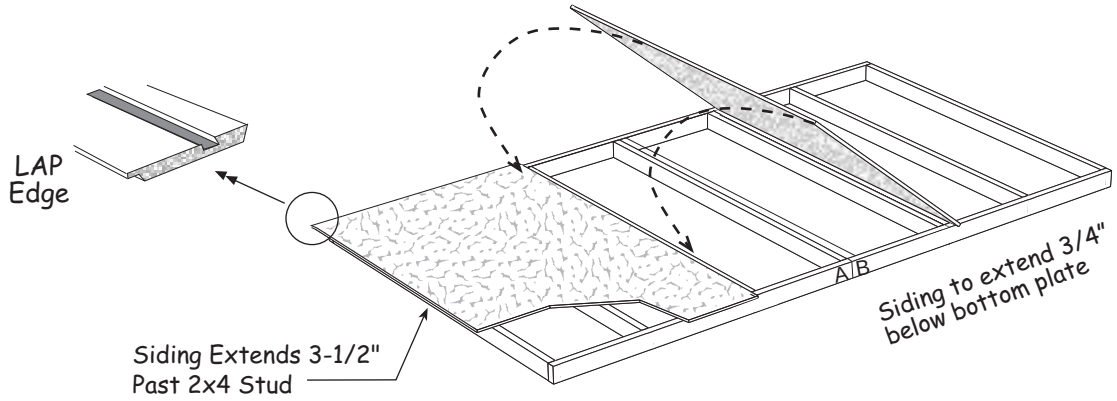
1. Position (4) four 68-1/2" boards together and indicate with 'X' marks where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.
2. Install (8) eight 72" long wall studs, between the wall plates, over the 'X' marks and where the plates meet. Use (2) two 10d sinkers at each end of stud.





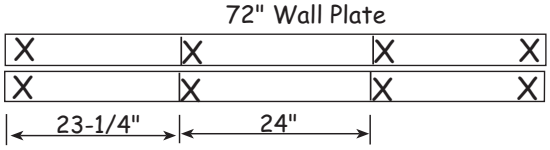
☞ **Select siding panels that are 75-3/4" in length for this wall panel.**

3. Nail wall frames together using 10d sinkers.
4. Square wall frame. Install the 1st siding panel with the 'LAP' edge extending 3-1/2" past the wall frame. The bottom will extend 3/4" below the bottom plate. Note; Cut the siding flush with the bottom plate if installing the building on a cement slab.
5. Install the other siding panels. Cut the last panel to extend 3-1/2" beyond the wall frame.

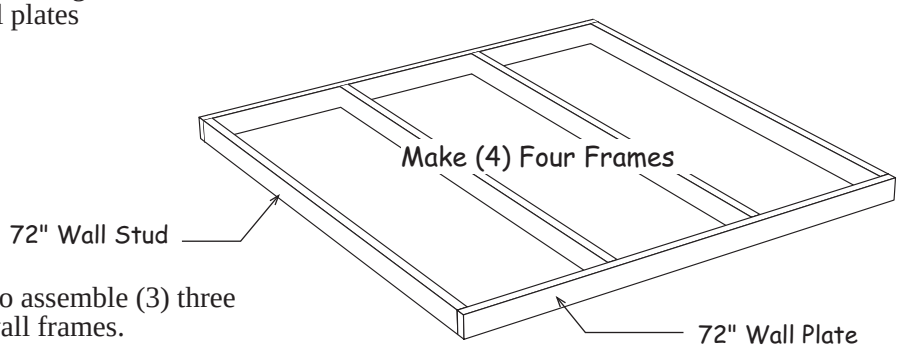


Step 5 Assemble Back & Front Wall Frames

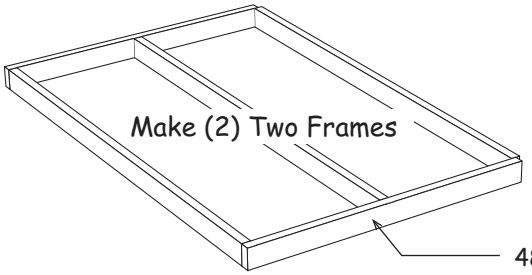
1. Position (2) two 2x4-72" boards together and indicate with 'X' marks, where the wall studs will be located.



2. Install (4) four 72" long wall studs between the wall plates

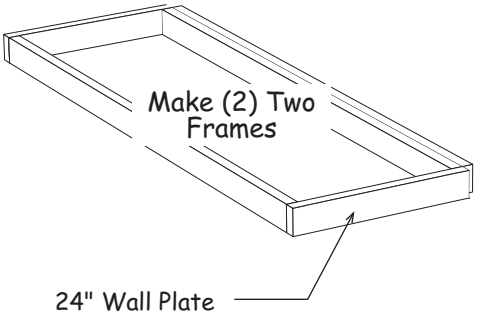


3. Repeat process to assemble (3) three more 72" long wall frames.



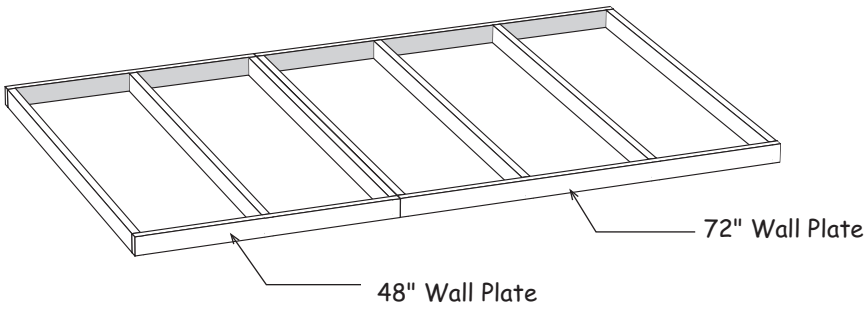
4. Install (3) three 2x4-72" wall studs between (2) two 48" long 2x4s. Install the stud in the center of the wall frame.
5. Repeat to make (1) one more 48" frame.

6. Install (2) two 2x4-72" wall studs between (2) two 24" long 2x4s.
7. Repeat to make (1) one more 24" frames.



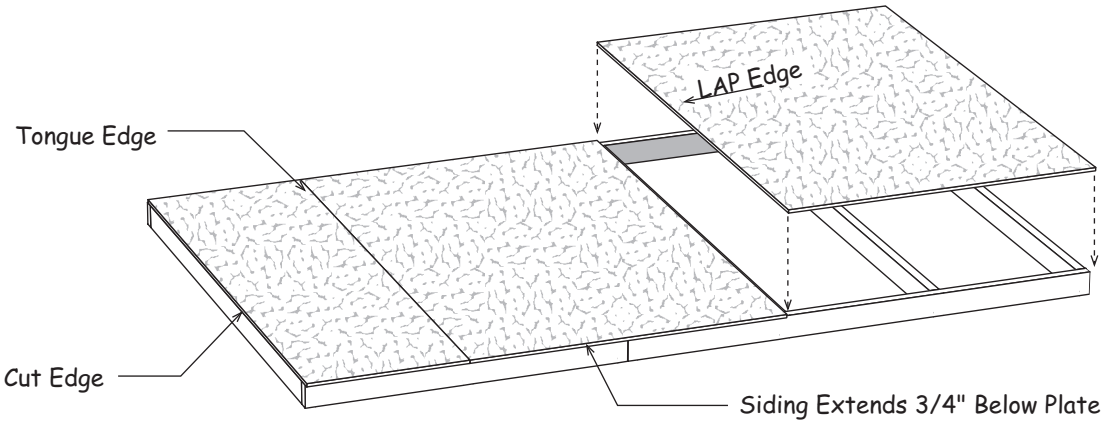
Step 6A Assemble 10' Long Back Walls

1. Position a 48" wide wall frame against a 72" wall frame as shown below. Nail frames together with 10d sinkers.
2. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same when the wall is square*.



☞ Select siding panels that are 79-1/2" in length for the back wall and the front wall. When installed, the siding will extend 3/4" below the bottom plate and 3-3/4" above the top plate. Cut siding flush with the bottom plate if installing the building on a cement slab.

3. Select a 24" wide panel, *with the 'tongue' edge,* and install this panel with the 'cut' edge' flush with the end of the wall and extending 3/4" below the bottom plate.
4. Install (2) two more siding panels.

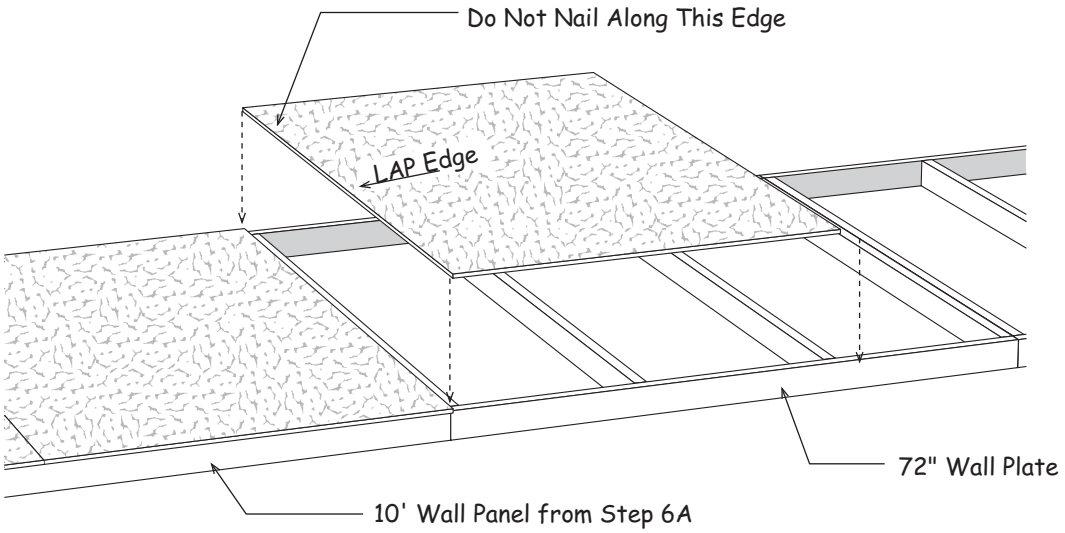


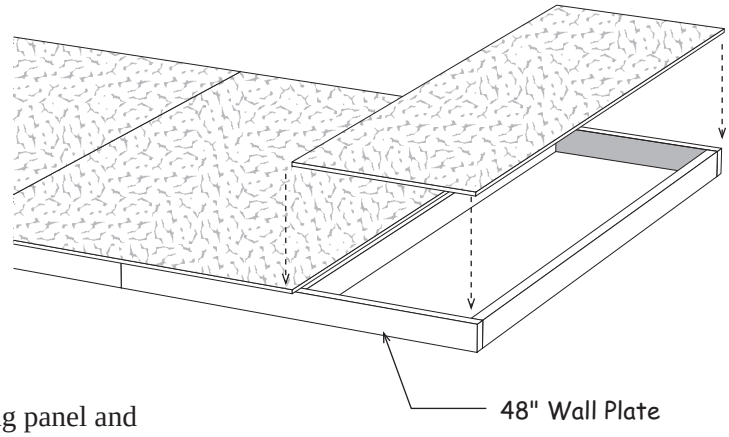
5. Repeat to assemble another 10' long wall frame, **do not apply siding**.

Step 6B Assemble Back Walls for 20' Building Length

1. Select the 10' wall frame, *without siding*, assembled in **Step 6A**. Position this wall frame, against the wall panel so the 72" section is against the sided panel as shown below. DO NOT nail these frames together so they can be separated later.

2. Square the wall frame. Install a full width siding panel but do not nail along the long edge that overlaps the 10' wall frame. You can nail this edge after the wall panels are installed. This will enable you to separate the wall panels making them easier to handle.

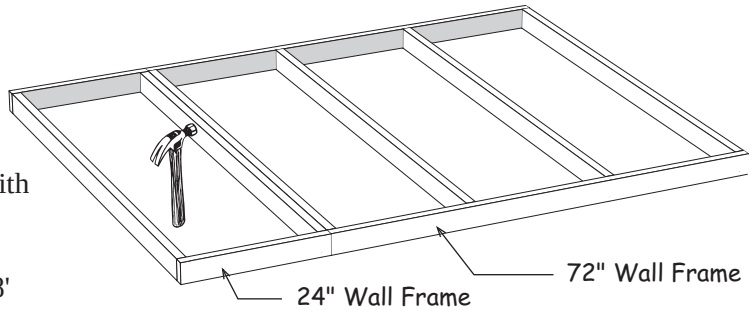




3. Install another full width siding panel and the 24" wide siding panel.

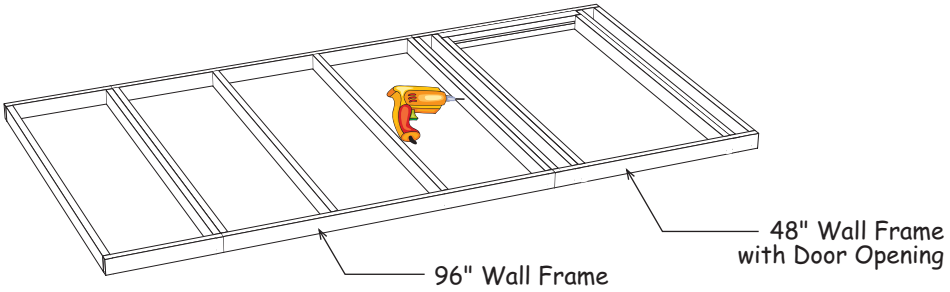
Step 7 Apply Siding to Front Wall Frames

1. Select a 72" wall frame and a 24"wall frame assembled in **Step 5**.



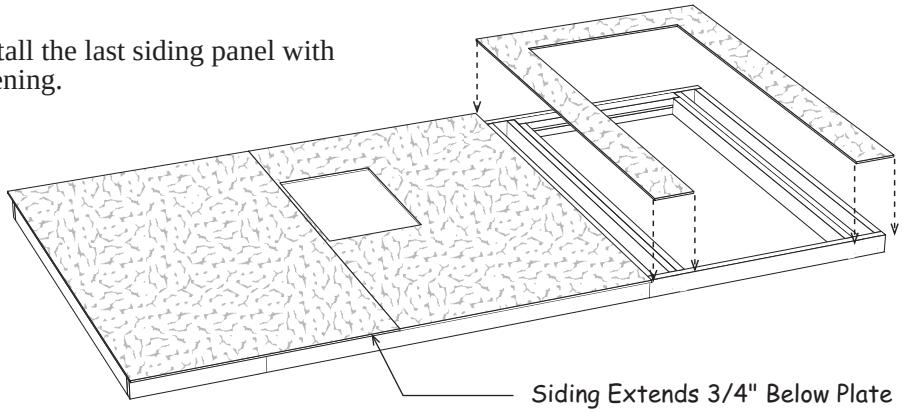
2. Nail these frames together with 10d sinkers. Square the wall frame.
3. Repeat to assemble another 8' wall frame.

4. Select the pre-built wall frame and install it next to the wall frame assembled above. Use 2-1/2" wood screws



5. Install the first 79-1/2" long siding panel with the 'LAP edge' flush with the end of the wall and extending 3/4" below the bottom plate.
6. Install another panel. *If installing windows you can cut the opening now. Instructions are in the window box*

7. You can install the last siding panel with the door opening.

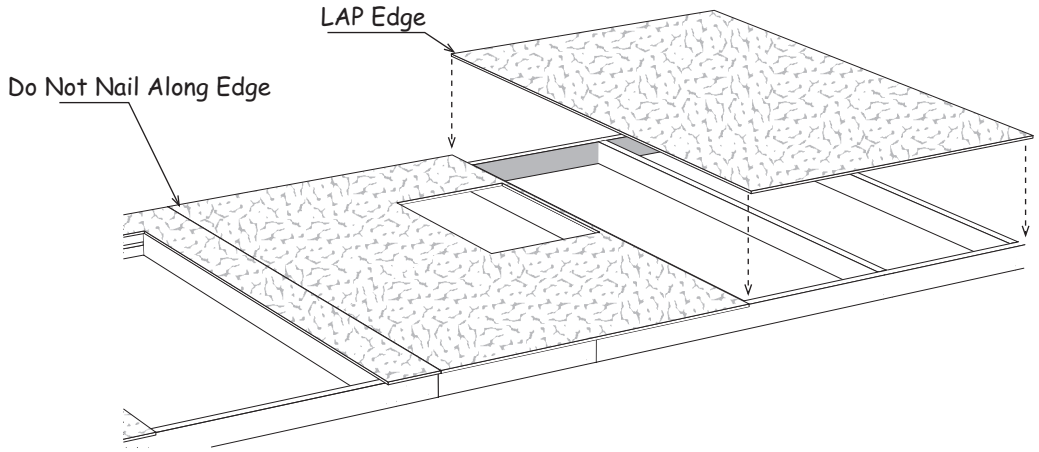


Step 7 Apply Siding to Front Wall Frames Continued

8. Butt the other 8' wall frame against the center door frame. DO NOT nail frames together. This will enable you to separate the wall panels making them easier to handle. Temporarily butting the frames together enables you to align the siding where it overlaps the adjoining wall panel.

9. Install a full width siding panel. DO NOT nail the long edge that overlaps the door siding panel. You can nail this edge after the wall panels are installed later.

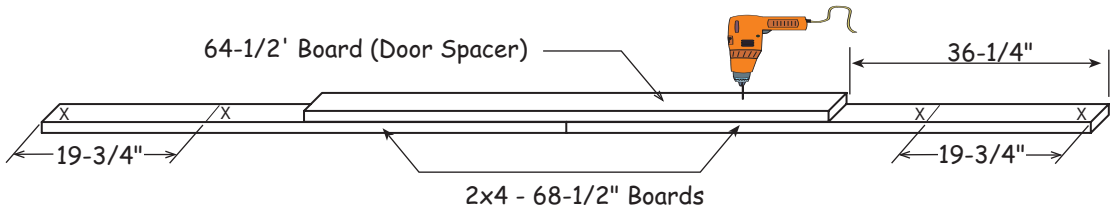
10. Install the last panel. Separate the wall panels.



Step 8 Assemble Bottom Plate with Door Spacer

1. Cut a 2x4-6' board to a length of 64-1/2". Butt (2) two 68-1/2" boards together. Center the 64-1/2" long 2x4 board (used as a door spacer) on top and screw the boards together using (4) four 2-1/2" wood screws.

2. Indicate where the wall studs will be located by drawing a line and placing an 'X' mark next to the line. The wall stud will be installed over, *covering*, the 'X' marks.

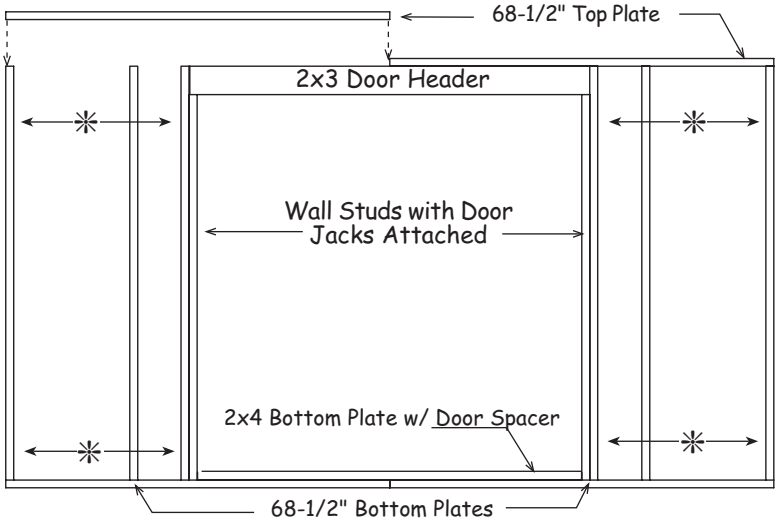


Step 9 Assemble Double Door Wall

1. Gather the material listed below to assemble the door wall.
2. Install (4) four 72" wall studs over the 'X' marks. Use (2) two 10d sinkers at each end of stud.
3. Install wall studs, *with the door jacks attached*, on each side of the door spacer.
4. Install door header on the door jacks.

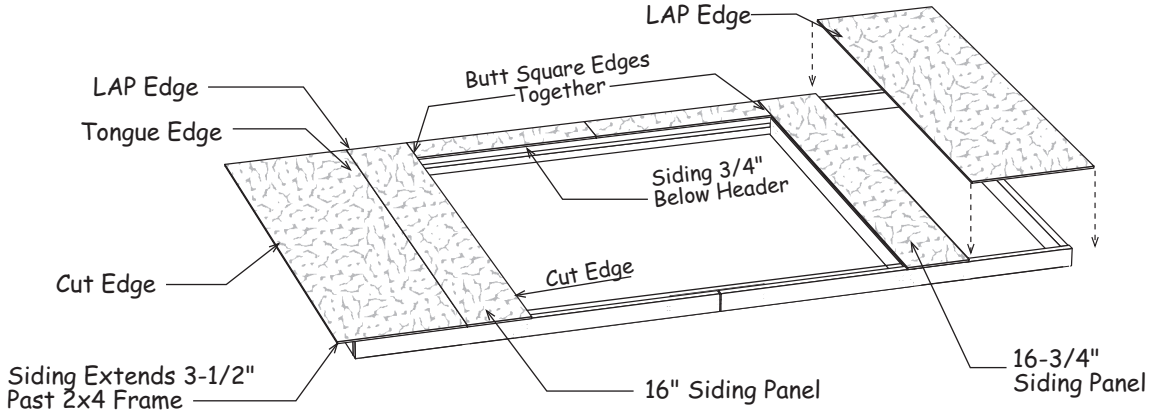
Material List	
2	68-1/2" Wall Plates
4	72' Wall Studs
2	72' Wall Studs with door jacks attached
1	Bottom Plate from **Step 8**

✳ Check measurements. They should be the same or the door opening will not be square!



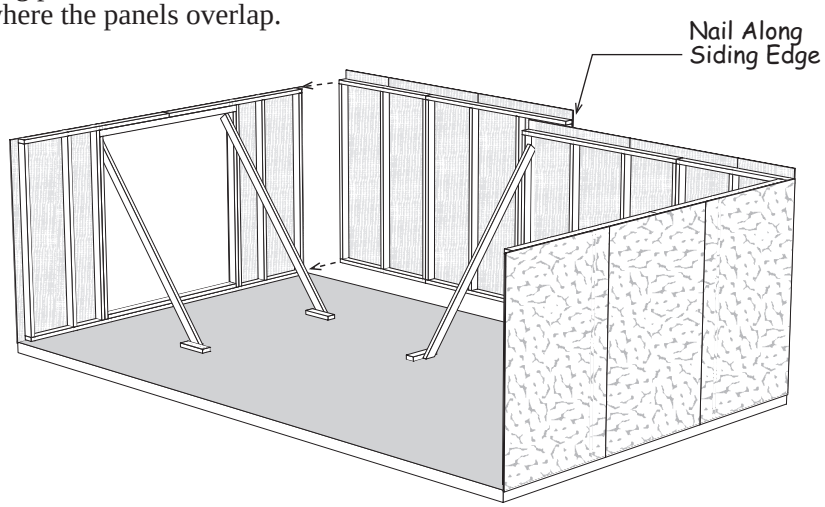
☞ **Select siding panels that are 75-3/4" in length for this wall panel.**

5. Locate a 16" siding panel that has a 'LAP' edge. Position the 'cut' edge flush with the left side of the door opening. **Do not** nail the 'LAP' edge until the other siding is applied.
6. Select the 24" wide siding panel, *with the 'tongue edge'*, and install this siding panel at the left end of the wall frame as shown below. The siding will extend 3-1/2" beyond the frame.
7. Install (2) two 4-3/4" pre-cut siding panels over the door opening, flush with the top plate.
8. Install a 16-3/4" siding panel with the 'cut' edge flush with the side of the door opening.
9. Install the last siding panel. It will extend 3-1/2" beyond the 2x4 wall frame.

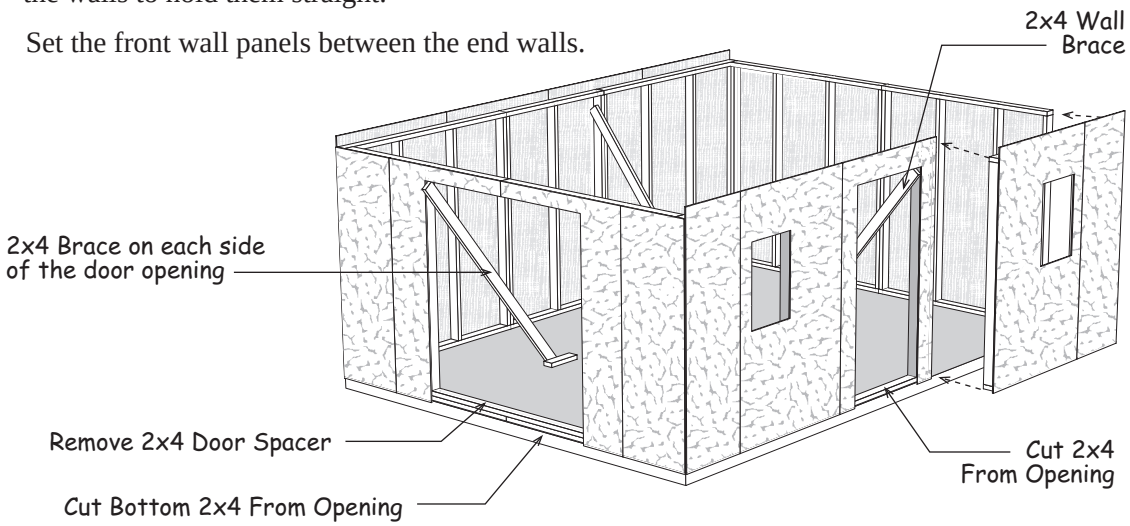


Step 10 Set Wall Panels

1. Set the back wall panel between the end walls. Secure wall panels together at the corners. Use (4) four 10d coated nails per corner. Nail wall panels to the floor. Nail through the bottom plate. Space 10d sinkers 24" apart.
2. Install the last siding panel on the back wall. Nail along the siding where the panels overlap.



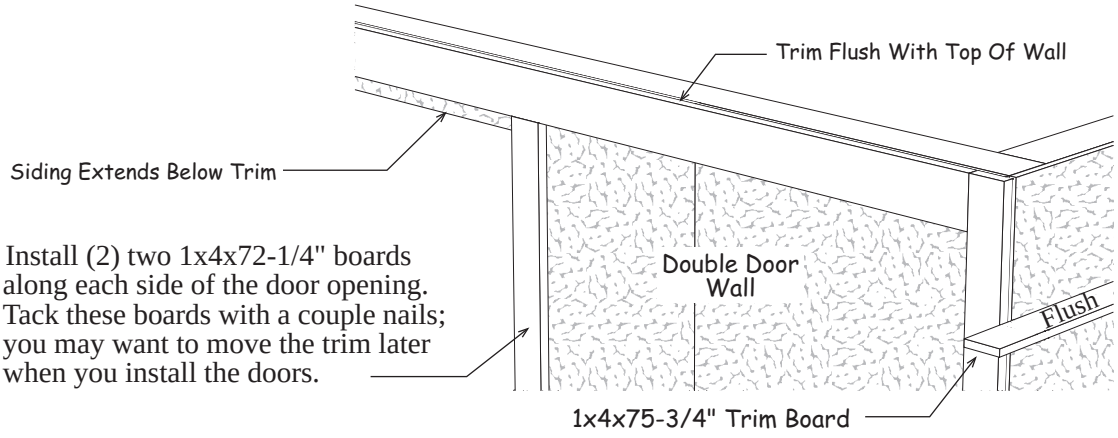
3. Disassemble the longer shipping pallet and use the 82" long 2x4s to brace the walls to hold them straight.
4. Set the front wall panels between the end walls.



5. Finish nailing along siding edges that overlap adjoining wall panels.
6. Remove the door spacer from the door opening.
7. Cut out bottom 2x4s from the door openings.Save for tie plate material.

Step 11 Install 12' End Wall Trim

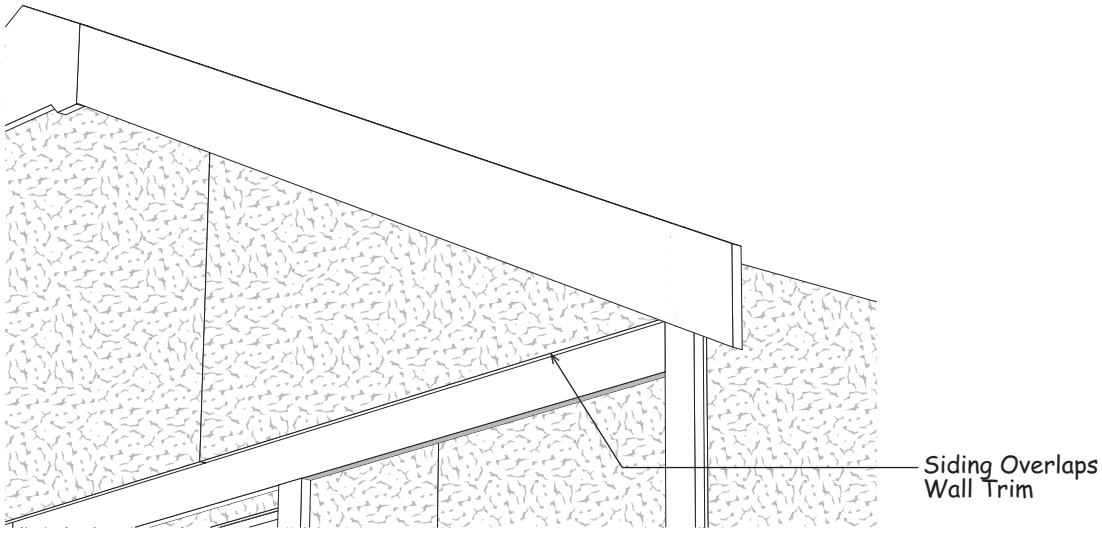
1. Install (2) two 75-3/4" long 1x4 trim boards at the corners of each 12' end wall. Install the trim flush with siding on the front and back walls. Use 8d galv. nails.
2. Cut (2) two 1x4-70" trim boards to fit between corner trim of both 12' walls. Install flush with the top of wall.



3. Install (2) two 1x4x72-1/4" boards along each side of the door opening. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.
4. Install corner trim and upper wall trim to the opposite end wall.

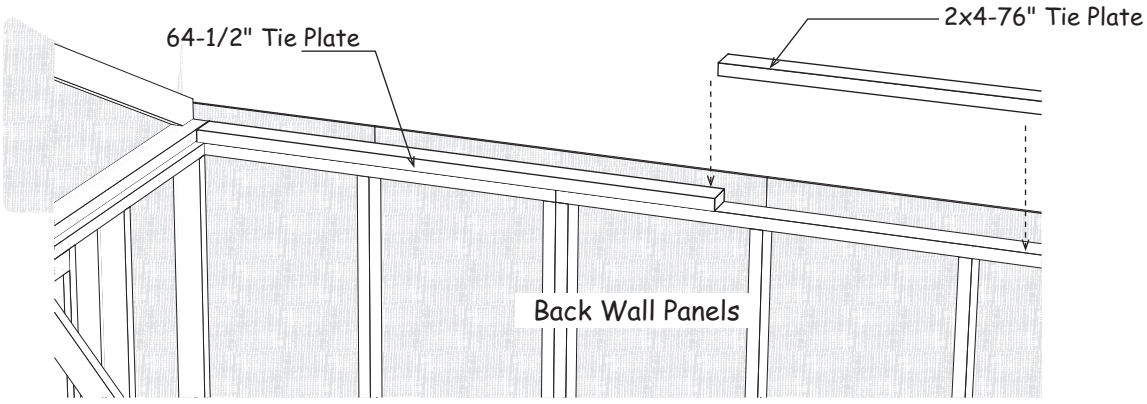
Step 12 Install End Gable Over Door Wall

Install gables on the 12' end walls. The siding will extend over the 1x4 trim on the lower wall. **NOT behind the trim.** Secure gable to wall by nailing through the gable plate with 10d sinkers. Nail siding along the overlapped 1x4 trim board with 8d galv. nails.

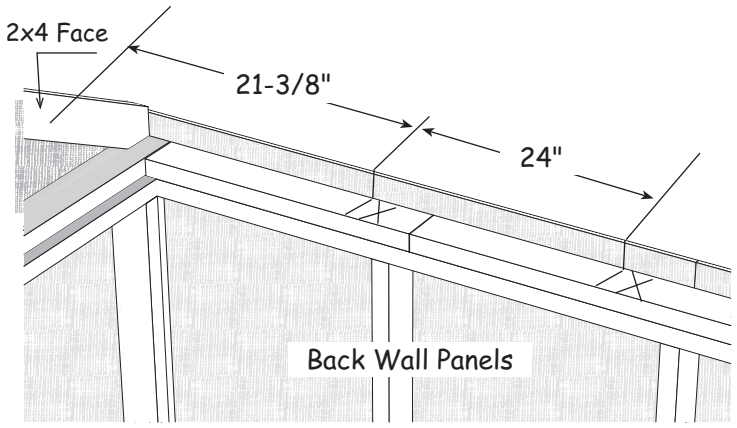


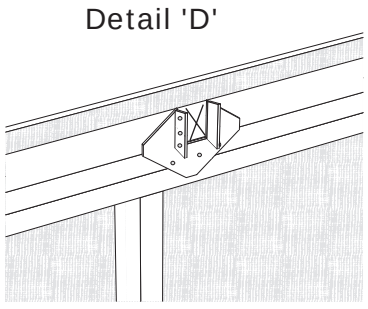
Step 13 Install 2x4 Tie Plates & Layout Roof Trusses

1. Disassemble the other shipping pallet, the 76" long 2x4s will be used as tie plates. Install all 2x4 tie plates with 10d sinkers.
2. Gather the 2x4s removed from the door openings in **Step 10,** also to be used for tie plates.
3. Install a 64-1/2" long 2x4 against the gable end. Install (2) two 76" long 2x4s next.
4. Cut one of the 2x4s, *from the door opening*, to fit against the gable end.
5. Repeat process to install 2x4 tie plates on the opposite wall.

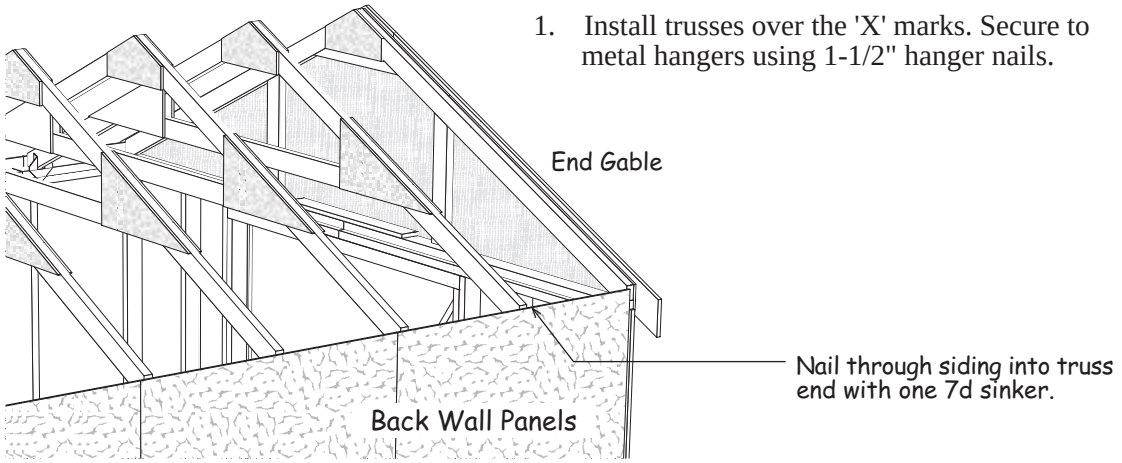


6. Layout the truss spacing. Facing the front of the building, start measuring from the left corner. Measure from the 2x4 face of the gable when marking the location of the first truss. The last truss space will be wider. **Important:** When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when installed.
7. Using 1-1/2" hanger nails, install metal hangers to the 2x4 tie plate. Align the opening center of the 'X' mark and bottom of the opening flush with the 2x4 tie plate. See **Detail 'D'**.



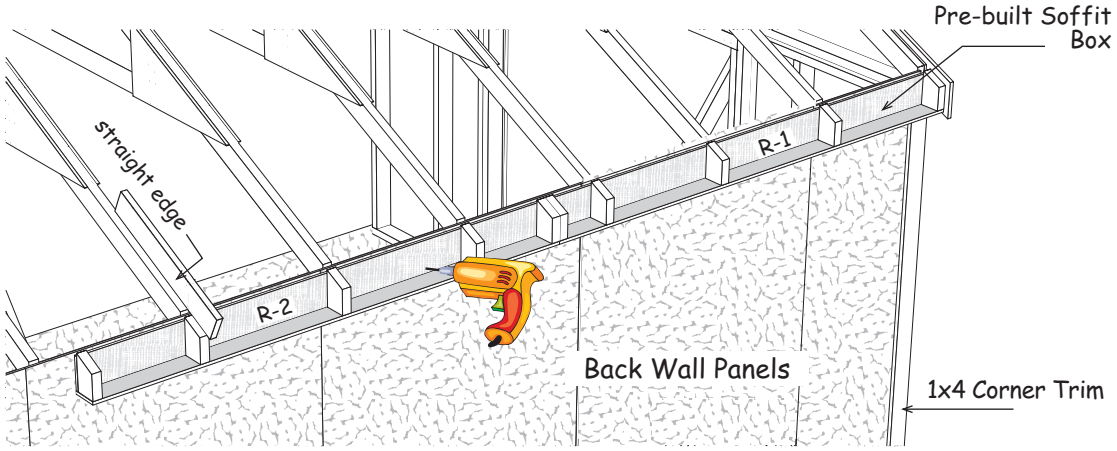


Step 14 Set Roof Trusses & Overhang



1. Install trusses over the 'X' marks. Secure to metal hangers using 1-1/2" hanger nails.
2. Install pre-built soffit overhang boxes on the back wall. Facing the back wall, install the soffit box marked 'R-1' on the right corner. Use a straight edge to align the top of the 2x4 blocks, *in the overhang*, flush with he top of the roof trusses. Screw the soffit overhang to the walls with 2-1/4" long wood screws. Use (2) two screws between the small 2x4 blocks. When the soffit boxes are installed correctly the 2x4 soffit blocks will align with the trusses.
3. Install another pre-built soffit overhang box (marked R-2) in the center.
4. Install a pre-built soffit overhang box (marked R-3) to finish.
5. Install the soffit boxes on the front wall. Facing the front wall install the soffit box marked 'L-1' on the left corner.

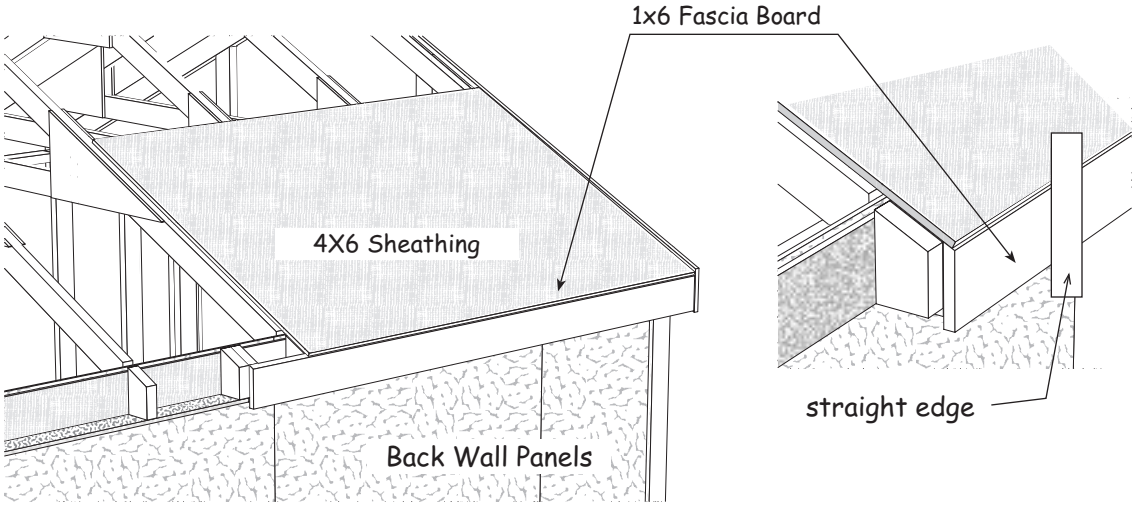
6 Install soffit boxes marked 'L-2 and L-3'.



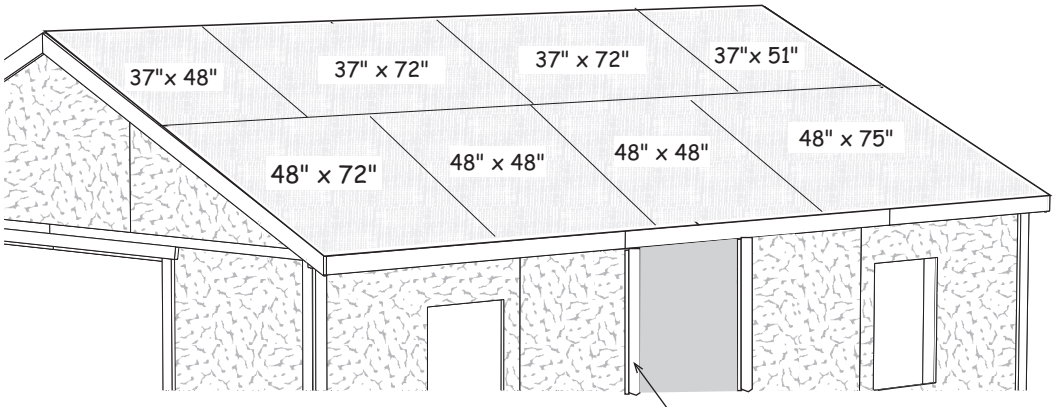
7. Install 73-1/4" long 1x4 trim boards flush with the trim on the end walls. Use 8d galv. nails

Step 15 Install 1x6 Fascia & Roof Sheathing

1. Install (3) three 81" long 1x6 fascia boards on the soffit boxes with the beveled edge flush with the top of the soffit blocks. Use 8d galv. nails.
2. Install 1x6 fascia boards on the front soffit boxes.
3. Install a 4'x6' roof sheathing panel with the bottom edge flush with the face of the 1x6 fascia. Make sure the trusses are plumb and the roof sheathing meets the center of the truss. Use 7d sinkers spaced 12" apart.



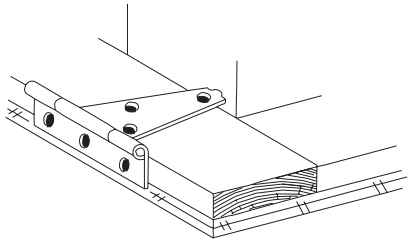
4. Install the remaining roof sheathing per layout below. The top row of roof sheathing will be about 1" below the ridge to allow for optional ridge venting.



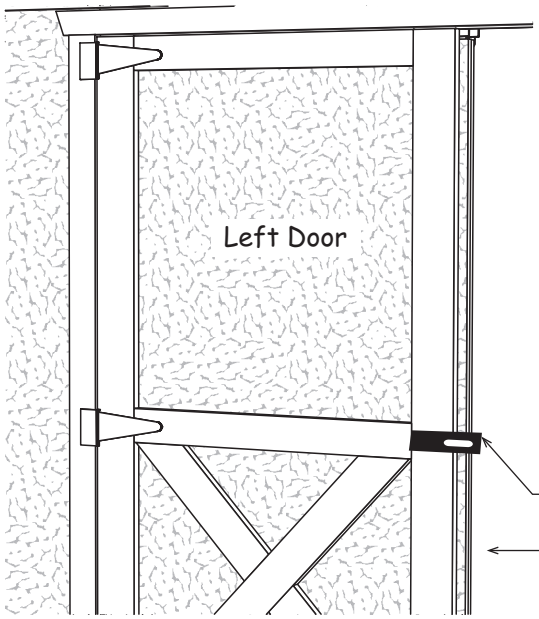
5. Install (2) two 1x4x73-1/4" boards along each side of the front door opening. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.

Step 14 Install Doors & Hardware

1. Locate the door marked (Single) on the back door frame. Lay this door on a level surface with the trim facing up. Depending on which way you want the door to swing, install (3) three 5" hinges on the left or right side of the door. To position the hinge properly, hold the rectangular plate against the frame. Use 1-3/4" black screws.



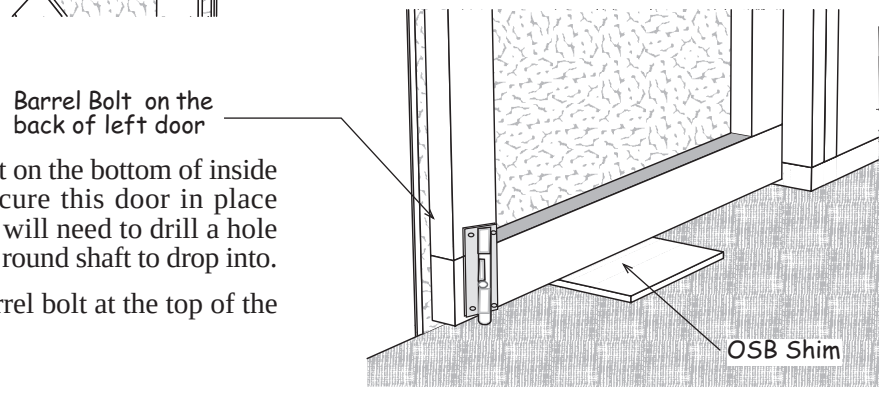
2. Lay the left door with the trim facing up. The siding on the left door extends past the door trim. See detail below.
3. Install 5" hinges to the left side of the door frame.
4. Install hinges to the right side of the other door.



5. Temporarily prop the doors in the opening. Leave a space at the top of the doors and between the doors and the side trim to allow room for the doors to expand when they absorb moisture. Use OSB shim to support bottom of doors.

   If your door opening is out of square, the space around the doors will not be even. You can remove and reposition the side trim to make allowances for this. The side trim does not have to be flush with the frame of the door opening. You can move the trim in or out to make the door spacing equal.

6. Install hinges to trim with 2" black screws.



7. Install a barrel bolt on the bottom of inside of left door to secure this door in place when closed. You will need to drill a hole in the floor for the round shaft to drop into.
8. Install another barrel bolt at the top of the door.

Packing List For Material Shipped on Shorter Pallet

Qty.	2x4 Framing	Size
46	Wall Studs & Plates	72 "
2	Wall Studs w/ header supports	72 "
8	Wall Plates	68 1/2"
2	Wall Plates	48 "
4	Gable Studs angled end	23 1/2"
	Pre-Built Components	
3	32" x 72" Barn Doors	
1	48" x 75" Wall Frame With Door opening	
1	2-1/2" x 67-1/2" Door Header	
	Miscellaneous Lumber	
10	2x4 Blocks for Truss Jig	10"
14	Wood Gussets for Trusses	8" x 20"
28	Wood Gussets for Trusses	12" x 24"
2	3/4" Plywood Gble Nailer	3-1/2" x 31-3/4"

Qty.	White Pine Trim	Size
4	1x4 Corner Trim	75 3/4"
6	1x4 Corner & DoorTrim	73 1/4"
4	1x4 Wall Trim	70 "
2	1x4 Door Trim	72 1/2"
2	White Pine Gable Keystone	16" x 10"

Qty.	***Hardware***	Qty.	
32	2-1/2" Soffit Screws	3	lb. 10d Sinkers
24	2-1/2" Deck Screws	3	lb. 8d Galv.
74	Black Hinge Screws	2	lb. 7d Sinkers
6	1x4 Drive-on Plate	3	lb. 6d Common
9	5" Door Hinges	1	lb. 6d Galv.
2	Door Hasp	1	lb. Hanger Nails
2	Bottle Wood Glue	2	Barrel Bolts
2	2" Screw Bits	14	Truss Hangers

Packing List For Material Shipped on Longer Pallet

Qty.	2x4 Framing & Soffit Boxes		
9	Collar Ties 82"	1	64-1/2" Tie palte
22	Rafters 80-12"	2	48" Wall paltes
7	72" Wall Studds	4	24" Wall Plates
6	Pre-built 81" Long Soffit Boxes		
	LP Primed Exterior Siding		
9	48" x 79-1/2"	3	48" x 75-3/4"
2	24" x 79-1/2"	2	16" x 75-3/4"
2	24" x 75-3/4"	2	32-1/2" x 4-3/4"
6	48" Gable Siding Panels - angle cut on top		

Qty.	White Pine Trim & Hardware		
4	1x6 Gable Trim		80 "
6	1x6 Side Wall Fascia		81 "
1	1 lb. 8d Galv. Nails	1	lb. 6d Common
1	1 lb. 7d Sinkers	4	Truss Hangers
	7/16" OSB Sheathing		
2	48" x 72"	4	37" x 72"
2	48" x 75"	2	37" x 48"
4	48" x 48"	2	37" x 51"
4	10"x22" Gussets	8	12"x24" Gussets

Building Size 16' x 12'	Building Size 20' x 12'	Material List
9 bdl.	11 bdl.	Roof Shingles *by Owner*
8 pcs.	9 pcs.	Roof 'drip' Edge-10' *by Owner*

Install metal roof edge the perimeter of the building. Install shingles according to the instructions on the wrapper. If you need more detailed instructions on installing shingles, there are good publications at book stores.